# Summary of CalPERS' cost and return performance for the 5-year period ended December 31, 2007.

1. Policy Return

Your 5-year policy return was 13.4%. This was above the U.S. median of 13.0% and slightly above the peer median of 13.3%.

2. Value Added

Your 5-year implementation value added was 1.2% or approximately \$2.3 billion per year. This was above the U.S. median of 0.7% and above the peer median of 0.9%.

3. Implementation Risk

Your 5-year implementation risk was 1.1%. This was close to the U.S. median of 1.2% and slightly above the peer median of 0.9%.

4. Costs

Your actual cost of 34.2 bps was below your Benchmark Cost of 39.0 bps. This suggests that your fund was low cost. You had a lower cost implementation style and paid slightly less for similar mandates to save approximately \$118 million in 2007.

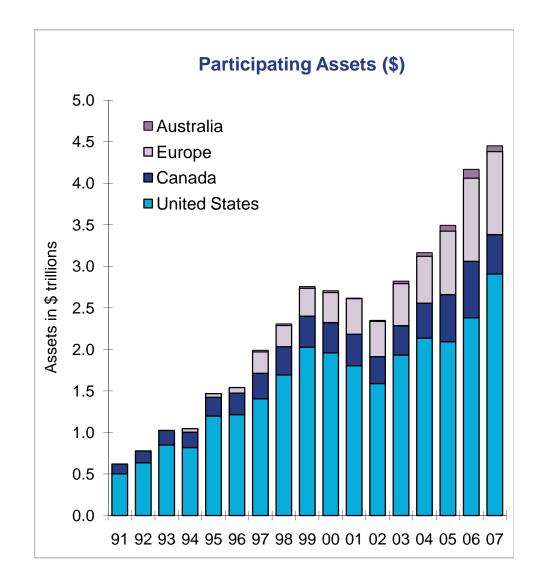
5. Cost Effectiveness

CalPERS' 5-year performance placed it in the positive value added, low cost quadrant on the cost effectiveness chart.

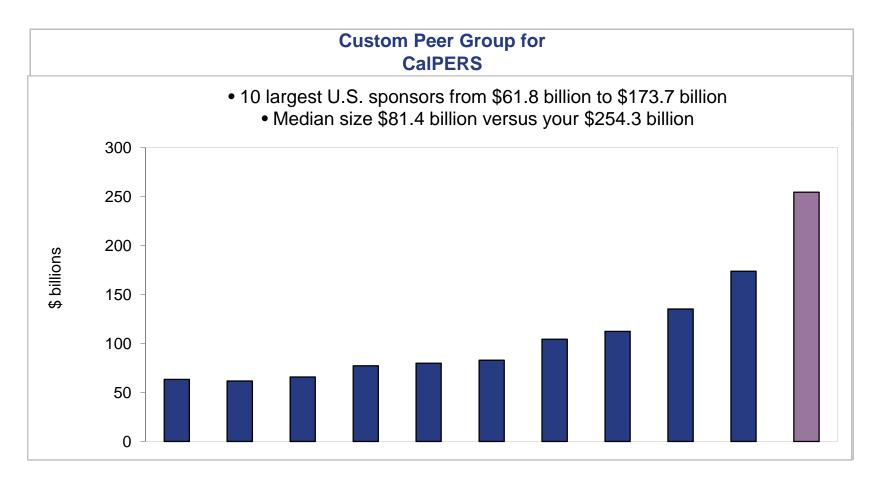
# CEM has been benchmarking costs and returns globally for 17 years. For CalPERS' returns, your fund was compared to 163 U.S. participants, totalling \$2.9 trillion in assets.

- 162 U.S. pension funds participate. They represent 30% of U.S. defined benefit assets. The median U.S. fund had assets of \$5.0 billion, while the average U.S. fund had assets of \$18.0 billion. Total participating U.S. assets were \$2.9 trillion.
- 83 Canadian funds participate representing
  70% of Canadian defined benefit assets.
- 22 European funds participate with aggregate assets of \$1,000 billion. Included are funds from the Netherlands, Norway, Sweden, Finland, France and Ireland.
- 7 Australian funds participate with aggregate assets of \$69 billion.

The most meaningful comparisons for your returns and value added are to the U.S. universe.



### The most valuable comparisons for cost performance are to your custom peer group because size impacts costs.



- In order not to skew your cost benchmark, your fund was not included in the peer group.
- In order to preserve client confidentiality, we do not disclose your peers' names in this document because of the Freedom of Information Act.

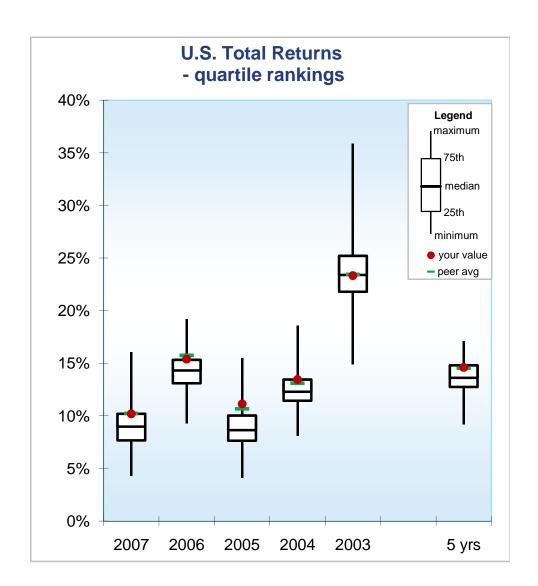
### CalPERS' 5-year total return of 14.6% was above the U.S. median of 13.6%.

Total returns, by themselves, are the wrong measures to compare and focus on because they do not tell you the reasons behind good or bad relative performance. Therefore, we separate total return into its more meaningful components: policy return and implementation value added.

	Your 5-yr.
Total Fund Return	14.6%
Policy Return	13.4%
Implementation Value Added	1.2%

This approach enables you to understand the contribution from both policy asset mix decisions (which tend to be the board's responsibility) and implementation decisions (which tend to be management's responsibility).

The median 5-year total return of your peers was 14.8%.



#### 1. Policy Return

### CalPERS' 5-year policy return of 13.4% was above the U.S. median of 13.0%.

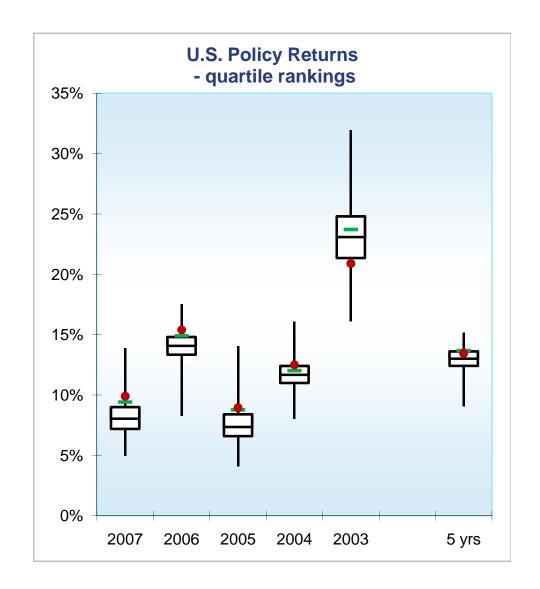
Your policy return is the return you could have earned passively by indexing your investments according to your investment policy asset mix.

Having a higher or lower relative policy return is not necessarily good or bad. This is because your policy return reflects your investment policy, which should reflect your:

- Long term capital market expectations
- Liabilities
- Appetite for risk

Each of these three factors is different across funds. Therefore, it is not surprising that policy returns often vary widely between funds.

The median 5-year policy return of your peers was 13.3%.



### CalPERS' 5-year policy return was above the U.S. median primarily because of:

- The positive impact of your higher weight in the second best performing asset class of the past 5 years: EAFE/Global Stock (your 20% 5-year average weight versus a U.S. average of 16%).
- The positive impact of your lower weight in one of the poorer performing asset class of the past 5 years: U.S. Fixed Income (your 23% average weight versus a U.S. average of 26%).
- The positive impact of your higher weight in Real Estate & REITS (your 8% average weight versus a U.S. average of 5%).
- Partially offsetting the above was your lower policy weight in the best performing asset class of the past 5 years: Emerging Stock (your 0% versus a 5-yr US average of 1%).

5-Year Average Policy Asset Mix							
	Your	U.S.	Peer				
Asset class	fund	avg	avg				
US Stock	40%	43%	39%				
EAFE/Global Stock	20%	16%	17%				
Emerging Mkt Stock	<u>0%</u>	<u>1%</u>	<u>2%</u>				
Total Stock	60%	60%	58%				
U.S. Fixed Income	23%	26%	23%				
Fixed Income Other	3%	4%	4%				
<u>Cash</u>	<u>0%</u>	<u>1%</u>	<u>1%</u>				
Total Fixed Income	26%	30%	28%				
Real Estate & REITS	8%	5%	7%				
Hedge Funds (RMARS)	0%	2%	1%				
Private Equity (AIM)	6%	3%	6%				
Total	100%	100%	100%				

#### 2. Value Added

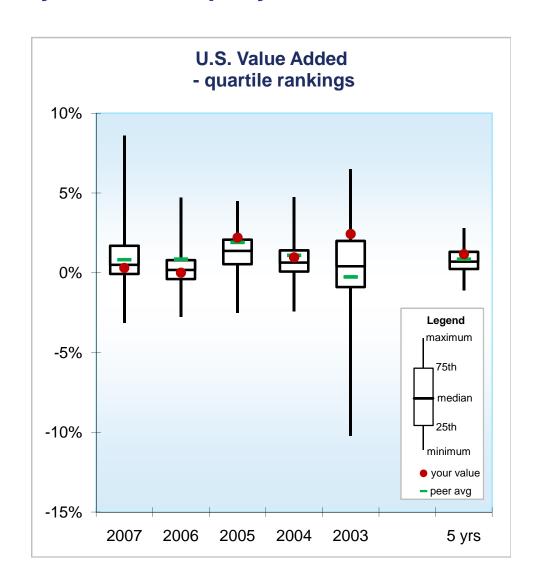
# Value added is the component of your total return from active management. CalPERS' 5-year value added was 1.2% or approximately \$2.3 billion per year.

Value added equals your total return minus your policy return. It can be further broken down into value added from:

- Security selection decisions within each asset category ("in-category"), and
- Asset mix decisions that result in varying from your asset mix policy ("Mix"). Mix also includes the value added from overlays.

CalPERS								
				Value added				
Year	Total return	Policy return	Total	In-category	Mix			
2007	10.2%	9.9%	0.3%	0.8%	-0.5%			
2006	15.4%	15.4%	0.0%	1.6%	-1.6%			
2005	11.1%	8.9%	2.2%	3.5%	-1.3%			
2004	13.5%	12.5%	1.0%	1.9%	-0.9%			
2003	23.3%	20.9%	2.4%	1.6%	0.9%			
5-year	14.6%	13.4%	1.2%	1.9%	-0.7%			

CalPERS' 5-year value added of 1.2% compares to a median of 0.9% for your peers and 0.7% for the United States.



## CalPERS had positive 5-year in-category value added in fixed income, real estate, hedge funds (RMARS) and private equity (AIM).

5-Year Value Added							
Asset category	CalPERS	U.S. Avg					
U.S. stock	0.1%	0.5%					
Foreign stock	-0.1%	-0.4%					
Fixed income	1.5%	0.8%					
Real estate	11.6%	1.9%					
Hedge Funds (RMARS)	3.0%	7.0%					
Private equity (AIM) *	7.3%	2.8%					

<sup>\*</sup> Comparisons of value added for private equity & hedge funds must be interpreted with caution because the types of investments and benchmarks can be extremely varied.

### 3. Implementation Risk

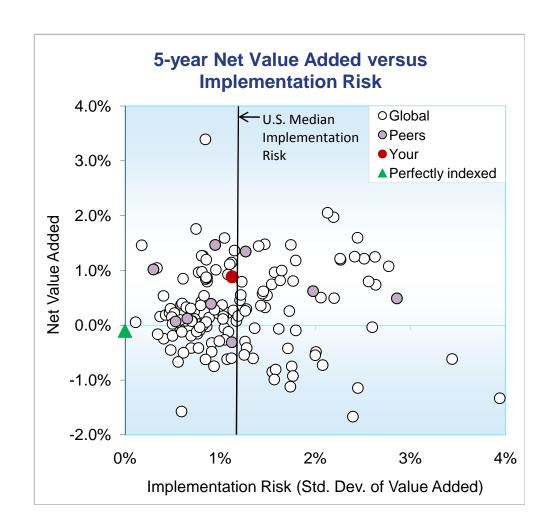
### CalPERS' 5-year implementation risk of 1.1% was close to the U.S. median of 1.2%.

Implementation risk is the risk of active management. It equals the standard deviation of your net value added.

Net value added equals gross value added minus asset management costs. Your 5-year net value added was 0.9% (1.2% gross value added minus 0.3% cost).

There was a slight positive relationship between implementation risk and value added over the past 5 years. On average, funds that took more implementation risk earned more value added.

CalPERS' 5-year information ratio was 0.8. This compares to the peer median of 0.3 and the U.S. median of 0.3. It is a measure of the return per unit of risk.



#### 4. Costs

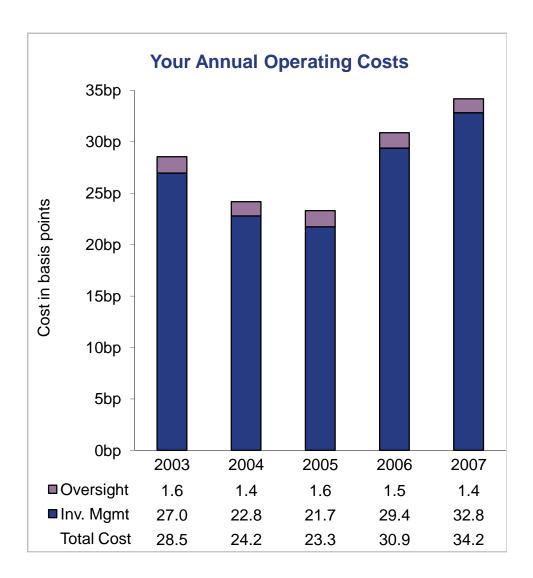
## CalPERS' asset management costs in 2007 were \$830.9 million or 34.2 basis points.

- CEM collects investment costs by major asset classes and 4 different implementation styles.
- Oversight, custodial & other costs include all costs associated with the oversight and administration of the investment operation, regardless of how these costs are paid. Costs pertaining to benefit administration, such as preparing checks for retirees, are specifically excluded.
- \* CEM's methodology does not include performance fees for Real Estate, Hedge Funds, Private Equity and Overlays in the total cost for benchmarking purposes because we cannot obtain these fees from all participants. Performance fees are included for the public market asset classes.

Your Investment Management Costs (\$000s)						
	Interi	<u>nal</u>		<u>External</u>		
				Active:	Active:	
	<b>Passive</b>	Active	Passive	base	perform	Total
US Stock - Broad/All	1,383	1,834		32,510	11,195	46,922
US Stock - Small/Mid Cap	113					113
Stock - EAFE	830	251	39	20,065	7,560	28,745
Stock - Emerging		167		9,018	15,501	24,686
Fixed Income - US		3,830				3,830
Fixed Income - EAFE				5,023	174	5,197
Fixed Income - High Yield		130		3,571		3,701
Fixed Income - Mortgages		28				28
Cash		86				86
Commodities	129					129
REITs	197			3,990		4,187
Real Estate ex-REITs				256,015	*	256,015
Hedge Funds - Direct (RMARS)				65,842	*	65,842
Hedge Funds - Fund of Funds (inc	l. est. underly	ing fees)		22,489	*	22,489
Private Equity (AIM)				336,016	*	336,016
Total Investment Managen	nent Costs	;			32.8bp	797,986
Your Oversight, Custoo	dial and C	Other A	sset Relat	ed Costs	s (\$000s)	)
Oversight of the fund						17,984
Trustee & custodial						4,879
Consulting and performand	ce measur	ement				9,612
Audit						460
Other						
Total oversight, custodial &		sts			1.4bp	32,934
Total asset management of	osts				34.2bp	830,920

#### Your costs increased between 2003 and 2007.

- Your costs increased primarily because you increased your investment in the highest cost asset classes. Your holdings of real estate, hedge funds and private equity increased from 13% of assets in 2003 to 20% in 2007.
- As well, you had performance fee increases in external U.S. stock portfolios in 2006 and 2007.
- These increases were mitigated by increasing the proportion of internal management of your stock and bond assets over time.



### Benchmark Cost analysis suggests that CalPERS was low cost in 2007 by 4.9 basis points or \$118 million.

To assess your cost performance, we start by calculating your benchmark cost. Your benchmark cost is an estimate of what your cost would be given your asset mix and the median costs that your peers pay for similar services. It represents the cost your median peer would incur if it had your asset mix.

Your total cost of 34.2 bp was lower than your benchmark cost of 39.0 bp. Thus, your fund's cost savings was 4.9 bp, suggesting that your fund was low cost by this amount.

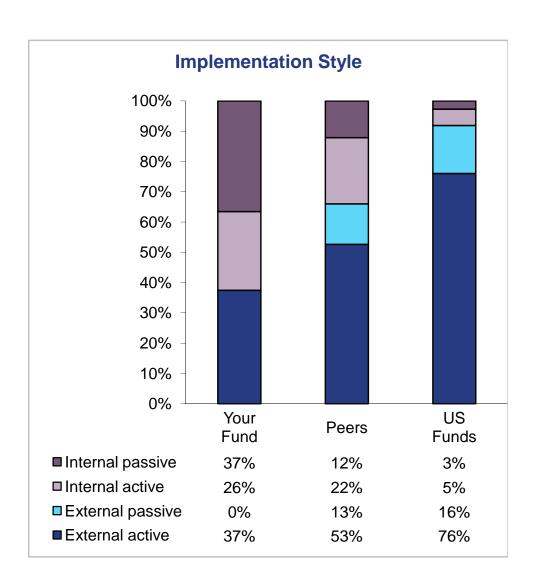
The following pages review reasons behind your low cost status.

	In \$000's	<b>Basis Points</b>
Your actual cost	830,920	34.2 bp
Your benchmark cost	949,260	39.0 bp
Your excess cost	-118,340	-4.9 bp

## A key cause of differences in cost performance is often differences in implementation style.

The greatest cost impact is usually caused by differences in:

• External active management because it tends to be much more expensive than either internal management, or passive management. You used less external active management than your peers (37% versus 53% for your peers).



### Differences in implementation style added 0.8 bps to CalPERS costs.

Impact of Differences in Use of Implementation Style							
	Your avg		External active %				Cost/
	holdings			Peer	More/	premium	(Savings)
Asset class	in \$mils	Yo	ur	average	(Less)	in bps	in \$000
US Stock - Broad/All	84,583	20	.6%	24.2%	(3.6%)	21.4 bp	(6,548)
US Stock - Small/Mid Cap	790	0.	0%	58.1%	(58.1%)	28.5 bp	(1,305)
Stock - EAFE	46,161	40	.0%	71.2%	(31.2%)	21.5 bp	(30,930)
Stock - Emerging	6,032	96	.1%	92.2%	3.8%	52.5 bp	1,212
Fixed Income - US	34,531	0.	0%	42.9%	(42.9%)	6.6 bp	(9,786)
Fixed Income - EAFE	7,118	100	0.0%	N/A		N/A	
Fixed Income - High Yield	1,428	59	.9%	96.4%	(36.4%)	36.3 bp	(1,891)
Fixed Income - Mortgages	17,475	0.	0%	N/A		N/A	
Cash	1,426	0.	0%	N/A		N/A	
Commodities	479	0.	0%	N/A		N/A	
REITs	2,141	48	.2%	49.2%	(1.0%)	38.5 bp	(79)
Real Estate ex-REITs	43,839	100	0.0%	86.3%	13.7%	37.9 bp	22,724
Hedge funds (RMARS)	6,118						
- Direct		{ 80	.4%	79.3%	1.1%	N/A	
- Fund of funds		{ 19	.6%	20.7%	(1.1%)	141.1 bp	(929)
Private Equity (AIM)	25,805						
- Direct		{ 100	0.0%	98.0%	2.0%	73.0 bp	3,735
- Fund of funds		{ 0.	0%	1.8%	(1.8%)	157.6 bp	(7,516)
Total		37	.5%	52.6%	(15.2%)		(31,313)
Total external active and fund	of fund style i	mpact	in bps				(1.3 bp)
Impact of differences in the us	e of lower cos	st styles	$s^2$				2.3 bp
•							(0.2 bp)
Total style impact	•			-			0.8 bp
1. The cost premium is the additional cost of external active management relative to the average of other lower cost implementation							

<sup>1.</sup> The cost premium is the additional cost of external active management relative to the average of other lower cost implementation styles - internal passive, internal active and external passive. A cost premium of 'N/A' indicates that there was insufficient peer data to calculate the premium.

<sup>2.</sup> The 'Impact of differences in the use of lower cost styles' quantifies the net impact of your relative use of internal passive, internal active and external passive management.

### The net impact of differences in external investment management costs saved CalPERS 0.9 bps or \$23 million.

Impact of Paying More/(Less) for External Investment Management						
	Your avg	Cost in bps			Cost/	
	holdings		Peer	More/	(Savings)	
	in \$mils	Your	median	(Less)	in \$000s	
US Stock - Broad/All - Active	17,439	25.1	23.4	1.6	2,839	
Stock - EAFE - Passive	6	70.9	2.5	68.4	38	
Stock - EAFE - Active	18,474	15.0	31.4	(16.4)	(30,329)	
Stock - Emerging - Active	5,794	42.3	60.2	(17.8)	(10,332)	
Fixed Income - EAFE - Active	7,118	7.3	N/A	N/A	N/A	
Fixed Income - High Yield - Active	856	41.7	38.4	3.4	288	
REITs - Active	1,033	38.6	42.3	(3.7)	(384)	
Real Estate ex-REITs - Active	43,839	58.4	58.4	0.0	0	
Hedge Funds (RMARS)	4,918	133.9	92.2	41.7	20,493	
Hedge Funds - Fund of Funds (RMARS)	1,200	187.4	233.4	(46.0)	(5,514)	
Private Equity (AIM)	25,805	130.2	130.2	0.0	0	
Total external investment management in	npact			-0.9 bps	(22,902)	

N/A' indicates insufficient peer data to do meaningful comparisons.

External private equity and real estate are two of the most difficult asset classes to benchmark because differences in costs are often due to differences in program style, maturity and accounting treatment for rebates instead of true savings. For these reasons, CEM has neutralized the effect of your fees from those two asset classes by making the median equal to your costs. Before neutralizing these costs, your real estate fees were below median (your 58.4 bps versus 80.5 bps for your peers) and your private equity (AIM) costs were above the peer median (your 130.2 bps versus 83.7 bps for your peers).

## The net impact of differences in internal investment management costs saved CaIPERS 4.6 bps or \$111 million.

Impact of Paying More/(Less) for Internal Investment Management						
	Your avg	<u>(</u>	Cost in b	<u>ps</u>	Cost/	
	holdings		Peer	More/	(Savings)	
	in \$mils	Your	median	(Less)	in \$000s	
US Stock - Broad/All - Passive	60,478	0.2	0.4	(0.2 bp)	(1,274)	
US Stock - Broad/All - Active	6,667	2.8	10.2	(7.5 bp)	(4,967)	
US Stock - Small/Mid Cap - Passive	790	1.4	1.7	(0.3 bp)	(24)	
Stock - EAFE - Passive	26,304	0.3	32.8	(32.5 bp)	(85,418)	
Stock - EAFE - Active	1,378	1.8	15.4	(13.6 bp)	(1,868)	
Stock - Emerging - Active	238	7.0	N/A	N/A	N/A	
Fixed Income - US - Active	34,531	1.1	2.0	(0.8 bp)	(2,921)	
Fixed Income - High Yield - Active	572	2.3	2.2	0.1 bp	4	
Fixed Income - Mortgages - Active	17,475	0.0	8.2	(8.2 bp)	(14,309)	
Commodities - Passive	479	2.7	N/A	N/A	N/A	
REITs - Passive	1,108	1.8	N/A	N/A	N/A	
Total internal investment management im	pact			(4.6 bp)	(110,776)	

<sup>\* &#</sup>x27;N/A' indicates insufficient peer data to do meaningful comparisons.

# The net impact of differences in CalPERS' oversight, custodial & other costs saved you 0.2 bps or \$5 million.

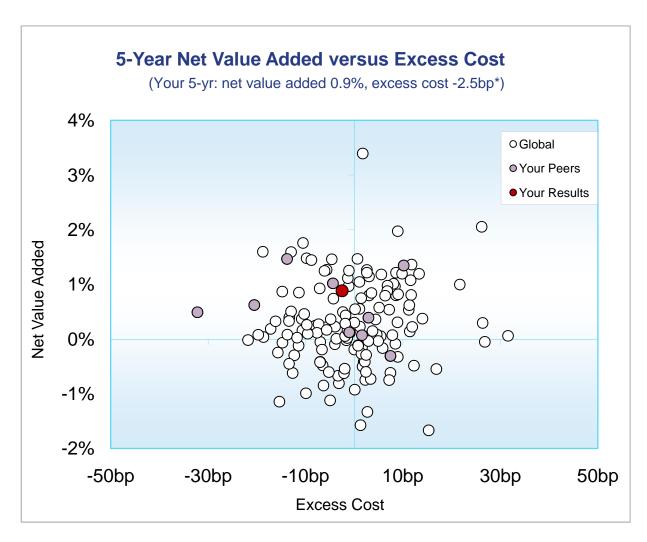
Impact of Differences in Oversight, Custodial & Other Costs						
	Your Avg		Cost/			
	holdings		Peer	More/	(Savings)	
	in \$mils	Your	median	(Less)	in \$000s	
Oversight	243,163	0.7	0.9	(0.1)	(3,617)	
Custodial / trustee	243,163	0.2	0.4	(0.2)	(4,496)	
Consulting / performance measurement	243,163	0.4	0.2	0.2	4,948	
Audit	243,163	0.0	0.0	(0.0)	(159)	
Other	243,163	0.0	0.1	(0.1)	(1,566)	
Total impact				(0.2 bp)	(4,890)	

In summary, CalPERS was low cost by \$118 million primarily because you paid less for similar mandates and had less external active management than your peers.

Your 2007 Excess Cost Breakdown			
	Excess/ (Saving		
	¢000-	basis	
	\$000s	points	
Impact of:			
Implementation style differences:			
Lower use of fund of funds	(8,446)	(0.3)	
Less external active management and more	(3, 1.3)	(3.3)	
lower cost passive and internal management	(22,868)	(0.9)	
Lower use of overlays	(4,492)	(0.2)	
Other style differences	<u>56,035</u>	<u>2.3</u>	
	20,229	0.8	
Paying less than your peers for:			
External investment management costs	(22,902)	(0.9)	
Internal investment management costs	(110,776)	(4.6)	
Oversight, custodial & other costs	(4,890)	<u>(0.2)</u>	
	(138,569)	(5.7)	
Total Savings	(118,340)	(4.9)	

5. Cost Effectiveness

## CalPERS' 5-year performance placed it in the positive value added, low cost quadrant.



<sup>&</sup>lt;sup>1</sup> Your 5-year net value added of 0.9% equals your 1.2% year gross value added minus your 0.3% cost.

Your 5-year excess cost of -2.5bp is the average of your excess cost for the past 5 years.